

IMPAIRED WORKERS IN INDUSTRY

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Impaired Workers in Industry¹

Summary

PHYSICALLY impaired workers employed in factories are just as efficient in the jobs they hold as their unimpaired fellow workers. This was the general opinion of management in the first 300 establishments reporting to the Bureau of Labor Statistics in a recent survey of the utilization of physically impaired workers in manufacturing industries. Eighty-seven percent of the 63,382 impaired workers employed in these establishments were reported to be just as efficient as the unimpaired doing similar work, and the 8 percent reported as more efficient outweighed the 5 percent reported as less efficient.

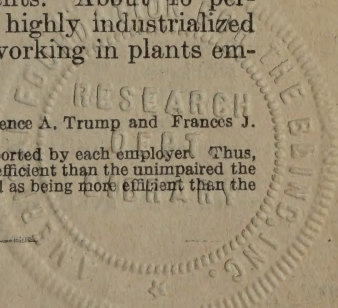
In respect to absenteeism, injury frequency, and labor turnover the physically impaired were rated as superior to the unimpaired. While 44 percent of the impaired workers were reported as having an absentee record no worse than their fellow workers, 49 percent had better records. Only 7 percent were absent more than the unimpaired. According to the reports, the physically handicapped workers generally experienced fewer accidents, for 38 percent were reported as having just as good an accident record, and 51 percent a better record than the workers without disabilities; 11 percent had a higher injury-frequency rate. Similarly, job changes were less frequent among them, with 31 percent reported as having a turnover record comparable to that of the unimpaired and 58 percent a better record. A higher rate of turnover was reported for 11 percent of these workers.²

Frequently advanced as a reason for the better absenteeism and labor turnover records of the impaired workers is the fact that, as a general rule, the handicapped worker has found it much more difficult to get a job than his more fortunate fellow worker and therefore exerts greater efforts to keep it. Further, he is anxious to prove to himself and to others that he is as good as, or better than, his unimpaired fellow worker.

Manufacturing plants in all parts of the country reported that they were utilizing workers with physical impairments. About 46 percent of all these workers were employed in the highly industrialized East North Central area; more than half were working in plants employing 10,000 or more persons.

¹ Prepared in the Bureau's Division of Industrial Hazards, by Clarence A. Trump and Frances J. Montgomery.

² Percentages are based upon the total number of impaired workers reported by each employer. Thus, if an employer reported that the impaired workers in his plant were more efficient than the unimpaired the total number of his impaired would be included in the percentage reported as being more efficient than the unimpaired.



A majority of the employers stated emphatically that selective placement is the key to their satisfactory employment. Difficulty in transfers from one job to another and in upgrading were reported by some manufacturers employing relatively large numbers of physically handicapped. Special in-service training facilities have been provided in an attempt to solve these problems. The necessity of flexibility in the manufacturing process was cited by a few manufacturers as limiting the number of physically impaired employees that could be utilized. Several foundries reported that few of their jobs could be filled by physically handicapped workers because foundry work is heavy.

In addition to surveying the plants by mail, the Bureau's representatives interviewed management in six companies that have long made a practice of hiring the physically handicapped. Some of these companies are so concerned with the problem of placing returning veterans that they are conducting surveys of the men who have left their plants for military service, to determine the new skills acquired and the type of work each man desires to engage in upon his return. Analyzing these replies, together with past records of the men, the employers are earmarking at least three jobs for each returning veteran. One of these jobs is being selected on the supposition that the veteran may return disabled.

In the cities in which two of these companies are situated, finding jobs for the handicapped has been made a community responsibility. Every device has been used to create an awareness among employers of the employability of such persons. Some leaders in the field believe that community interest is one answer to the employment of the physically disabled.

The results so far show that impaired persons have been hired in appreciable numbers, especially in critical labor-market areas and in industries engaged most directly in essential war work. Many of these workers probably will be out of jobs when this work ceases. The position of the handicapped worker may be further weakened by the return of the disabled veterans of World War II who must be absorbed into industry. In order that existing prejudices may be met and overcome and that the performance of impaired workers at jobs at which their disabilities are no handicaps, may be appreciated fully, it is essential that a body of factual, objective data be made available. The Bureau hopes to be able to continue its survey, to provide this information.

Scope of the Survey

To fill the need for information on the job performance of workers with disabilities, the Bureau of Labor Statistics in cooperation with the War Manpower Commission, the Office of Vocational Rehabilitation of the Federal Security Agency, and the Veterans Administration undertook a study of plants employing physically impaired workers. The study consists of 3 parts: (1) A preliminary analysis, part of which is presented here, including a mail survey of the performance of impaired workers; (2) a series of case studies in plants with records permitting a statistical analysis of the performance of the impaired and the unimpaired, which cannot be completed until funds are made available; and (3) a critical analysis of prevailing methods

of placement and rehabilitation, as well as of workmen's compensation problems.

On the questionnaire used in the mail survey, information was requested concerning total employment, number of impaired workers, type of manufacturing activity, physical examinations, job analyses, methods of placement, special problems encountered in the utilization of impaired workers, and job performance of the impaired as compared with the unimpaired. In order to obtain comparative performance data the employer was asked to check for each of the four measures of general performance (efficiency, absenteeism, injury frequency, and labor turnover) whether his impaired workers were better than, as good as, or poorer than the unimpaired doing similar work. Therefore, in the statistical analysis of comparative performance the impaired workers are necessarily treated as groups rather than as individuals.

At the outset it was recognized that neither the number of physically impaired persons in the United States nor the number employable were known. As of 1940, it was estimated that there were 5 million persons with major or minor physical impairments. This estimate included persons with incapacitating and nondisabling orthopedic impairments, total or partial deafness, and blindness in one or both eyes.³ Of these 5 million persons, 3 million were within the employment age groups. Over a year ago, the War Manpower Commission estimated that there were between 2½ and 3 million physically disabled persons available for industrial employment. It has been estimated that there are 230,000 blind persons who can be fitted into industry.

It is known that the employment of disabled civilians has increased rapidly during the past 2 years, for the records of placements made through WMC facilities reveal that industry has hired increasing numbers of handicapped persons, primarily because of the manpower shortage created by the war. Industry is now faced with another problem. When labor was scarce, employers hired anyone available and made special efforts in many cases to subdivide jobs so that inexperienced and impaired workers could be utilized successfully. Many of these employees will work for the duration only and will leave the labor market, while the returning veterans gradually find their way back into civilian employment. Some of these veterans will be disabled and will be unable to fill the jobs they left or similar jobs. In view of this, it is important to know how successful the disabled men and women have been, whether they have been able to maintain the production pace, and what the problems have been in their employment.

The analysis presented here covers 300 manufacturing establishments which returned the questionnaire on the performance of impaired workers. Although this sample is small, it is nevertheless the first study of this magnitude. The replies indicated, however, that in most cases the employers did not base their judgment on actual statistical measurements. It is likely that such measurements would confirm their opinion, but the fact remains that factual measurements are not yet available.

For purposes of the study, impaired workers were defined as "em-

³ The Physically Handicapped, by Bernard D. Karpinos. Reprint No. 2521 from the Public Health Reports (Washington), October 22, 1943, p. 17.

ployees with marked physical impairments which limit their working capacity if not properly placed." In June 1944, the 300 manufacturers reported that of their 1.3 million employees, approximately 63,000 were thus handicapped. Many companies were so interested in this problem that they conducted surveys within their plants in order to provide the information desired.

The majority (63 percent) of the reports came from establishments in the East North Central and Middle Atlantic States. Fifty-seven percent of the companies employed fewer than 2,000 persons. Half of the reporting plants were engaged in the manufacture of transportation equipment, iron and steel, munitions, and other war material.

Placement of Impaired Workers

Much has been written about how impaired persons should be placed and what facilities should be provided for their proper placement. This survey indicates that the program of selective placement is quite widespread. Only 7 percent of the 300 companies reported that they neither gave pre-employment physical examinations nor had made an analysis of the jobs within their plants; 17 percent reported that job applicants were given pre-employment physical examinations but that they were not placed on the basis of job analyses; 15 percent reported job-analysis programs only; and 61 percent reported both methods. There is strong indication that many plants, regardless of size, are cognizant of the fact that it is now ordinary procedure to examine an applicant for a job and to make a detailed study of the physical requirements for each job in order to place the applicant most advantageously from both his and the firm's viewpoint.

Some small plants consider the elaborate personnel departments of the larger concerns too costly for their own operation. From plant visits it was found that it is not necessary for small employers to maintain the services of a full-time medical examiner and a special placement officer for physically impaired applicants. Any plant can make its own analysis of the physical requirements necessary for each job, and the specialists of the War Manpower Commission stand ready to aid them in making such an analysis. A fair examination made by a competent industrial physician should supply the information necessary to place the impaired worker satisfactorily. The applicant's abilities, training, and experience obviously must also be taken into consideration.

From such simple arrangements as the above, the selective placement facilities range up to very formal ones entailing special counselors and other specialists trained in the placement problems of impaired workers. It should be pointed out that the placement of the blind involves additional problems. A blind person must be trained on the job and special attention must be given to introduce him to the surroundings and to the job itself. In this questionnaire survey, no attempt was made to segregate the impaired by type of disability. A few plants reported that they have found special types of impaired persons, as for example the blind and the deaf, to be particularly adaptable to the operations within their plants. Blind workers sorting rivets, bolts, and small parts by touch are doing better work and staying on the job longer than sighted workers. In extremely noisy

shops, such as boiler factories and the riveting departments of air-frame plants, it has been found that deaf workers are more satisfactory than those who can hear.

One of the major problems brought to light in this survey is that the number of jobs open to the impaired within a plant is limited. Especially hazardous or heavy industries and those using the production-line method believe that they cannot use handicapped persons. Some plants, after considerable job analyses, reported they had reached their limit of employment of impaired workers. Many employers seem to be of the opinion that such workers are useful only on tedious or repetitive jobs or as clerks and watchmen. Perhaps a more thorough analysis of physical requirements would reveal additional jobs suitable for the physically handicapped, in plants where this opinion is held.

Such a job analysis should reveal to the employer the jobs which can be performed by persons with one arm, or no hearing, etc. In many cases it will be discovered that a slight job change will permit the use of a physically handicapped person on a particular operation. A striking example of this occurred in a plant where a one-armed operator was given a trial on a particular job. In the course of her work she had to adjust a small screw below the machine table. Normal operators merely reached under the machine, located the position of the screw with one hand and, with a screw driver in the other, made the necessary adjustment. This was impossible for the one-armed operator, so she requested a mirror. When the mirror was placed so that she could see the location of the screw, she easily adjusted it. As a result, the company concluded that mirrors were equally helpful to normal operators. Other equally simple modifications can be made, such as placing a lever on the left instead of on the right, lining up tools in another order, or converting foot releases to hand releases. Such modifications can be determined from job analyses as well as by the workers on the jobs, and the number of jobs available to persons with physical disabilities can be increased.

The difficulty of transferring the physically impaired from one job to another and the consequent loss in flexibility of plant operations was cited by a number of employers as a limitation on the utilization of these workers. Some plants have solved this problem by providing extra training facilities.

A number of plants made adjustments in their personnel and in working conditions, to make work possible for large numbers of handicapped workers. Besides providing special in-service training facilities to aid in job transfers and upgrading, they had trained special supervisors for selected groups of deaf and blind. Many pointed out that special clearance for job transfers was made through the medical officer. In order to spare the more seriously handicapped the general confusion of the rush hours, these workers in some cases were permitted different hours for entering and leaving the plant and for lunch and rest periods.

Union agreements were mentioned in a few instances as hindering the employment of the physically impaired. In a few industries, these contracts require that all new employees enter a plant as laborers. Such a requirement might keep some workers from jobs which they could otherwise fill. Seniority provisions of agreements were

likewise mentioned as deterrents to the employment of the handicapped. How widespread these two requirements are cannot be determined from this survey, as relatively few employers remarked upon them.

The problem of workmen's compensation was not emphasized to the extent that might be expected. Only 2 percent of the reporting firms commented that some of the employees attempted to obtain compensation for the aggravation of an old injury.

Performance of Impaired Workers

It is clear from the reports that the majority of companies consider handicapped persons to be as good as or better than the nonhandicapped, as regards performance on the job. Only 5 percent of the 63,382 impaired workers covered in this study were reported to be less efficient; only 7 percent had poorer absenteeism records; 11 percent were reported as having accidents more frequently than their fellow workers; and 11 percent showed greater tendency to seek employment in other companies.

On the whole, employers seemed pleased with the performance of this group. Many noted that this depends especially upon selective placement. The crux of the problem is given in the following comment made in one of the reports:

Successful experience with handicapped persons may be expected when disabilities are not permitted to interfere with performance and safety factors. Job descriptions with physical requirements check lists make possible the classification of jobs in terms of disabilities which will not interfere with performance and safety factors. When employment and medical departments are guided by such data, intelligent recruiting and placement of handicapped workers can be expected.

Experience of Companies with over 3 Percent of Impaired Workers

Of the 300 reports received, 128 were from establishments in which more than 3 percent of the total labor force consisted of impaired workers. Of 502,851 workers in these 128 plants, 53,035 had physical disabilities. Sixty-two percent of the 128 plants were in the East North Central and Middle Atlantic areas. The majority of them were of small size: 33 reports came from plants employing fewer than 500 persons; 20 from the 500-999 group; 15 from the 1,000-1,499 group; 12 from the 1,500-1,999 group; and 47 from plants employing 2,000 or more persons. The principal industries represented in this group were those manufacturing transportation equipment, iron and steel, and munitions.

Eight percent of the companies used neither physical examinations nor job analyses in making placements, 15 percent used physical examinations only, and 14 percent job analyses only. In 63 percent, both methods were in use. This group of 128 plants contained those that have gone farthest in providing special placement facilities. Although the group contained few employing great numbers of impaired, in those few the problems have been thoroughly investigated and special provisions made.

The performance records in these plants are as outstanding as those reported for all 300 companies. The general attitude is expressed in the following quotations taken from the returned questionnaires.

From a company in which 11 percent of the total force consists of impaired workers, the management sent the following comment:

We have employed persons with nearly all types of physical impairments except blindness and epilepsy. The problem of using handicapped persons has been given special consideration recently for two reasons: (1) They are an added labor resource in a tight labor-market area, and (2) we are preparing for the return of our boys in the service who may come back with some degree of physical impairment.

A larger company employing over 200 handicapped workers wrote:

We have found that people with marked physical handicaps can be used to advantage in our factory jobs. They must be carefully placed as to job and also supervision. Under such circumstances they do as well or better than unimpaired individuals, depending upon the personalities involved. However, they are not as flexible as the others and are more difficult to shift from job to job as production, material, or jobs may require.

A large aircraft corporation employing 900 workers with physical impairments noted that—

In the placement of impaired workers, care is taken to make sure they are placed on jobs they can do. An orientation program whereby they are checked periodically by our personnel counselors is also in operation. Cases needing adjustment or change in work are, therefore, taken care of before any real difficulty develops.

Deaf persons have been found very useful in the riveting departments. Because of the noise involved, it has been found that their work is generally better than that of persons with normal hearing. This applies to efficiency on the job, absenteeism, and labor turnover. Blind persons have been used successfully in salvaging operations, mainly in the sorting of rivets.

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